## ABSTRACT

The present invention provides an iontophoresis system for non-invasively taking a physiological substance out of 5 the living body, the system being suitably used for the mucous membrane. The present iontophoresis system non-invasively takes a physiological substance out of a living body. The system includes a plurality of electrode structures and a power supply device connected to the electrode structures. 10 At least one of the electrode structures has a physiological substance extraction pad applied to the mucous membrane. In the present system, the time to apply electric energy to the living body by the power supply device is set between 30 and 20 minutes. The physiological substance seconds 15 extraction pad which is provided in the electrode structure is applicable to the mucous membrane of the mouth and can be used, for example, to monitor glucose in the living body or an amount of drug administered.